AMENDMENTS TO THE CLAIMS

Please amend claims 1-21 and add new claim 22 as follows:

1. (currently amended) An optical coupler comprising an input waveguide, an intermediate waveguide, an output waveguide, a first grating situated between the input and intermediate waveguides, and a second grating situated between the intermediate and output waveguides such that, in use, light propagating in the input waveguide is coupled into the intermediate waveguide with the assistance of the first grating, and ~~thence~~ then is coupled into the output waveguide with the assistance of the second grating.

2. (currently amended) A coupler according to claim 1, further comprising only two said gratings.

3. (currently amended) A coupler according to claim 1 ~~or claim 2~~, which is a directional coupler.

4. (currently amended) A coupler according to ~~any preceding~~ claim 1, ~~in which~~ wherein the input and output waveguides have differing refractive indices.

5. (currently amended) A coupler according to ~~any preceding~~ claim 1, ~~in which~~ wherein the input and output waveguides have at least one differing transverse dimension.

6. (currently amended) A coupler according to ~~any preceding~~ claim 1, ~~in which~~ wherein the intermediate waveguide has a different refractive index to that of the input waveguide, ~~and/or~~ or the output waveguide, or both.

7. (currently amended) A coupler according to claim 6, ~~in which~~ wherein the intermediate waveguide has a higher refractive index than ~~that of~~ the input waveguide and a lower refractive index than ~~that of~~ the output waveguide.

8. (currently amended) A coupler according to ~~any preceding~~ claim 1, ~~in which~~ wherein the intermediate waveguide has at least one different transverse dimension to that of the input waveguide, ~~and/or~~ or the output waveguide, or both.

9. (currently amended) A coupler according to ~~any preceding~~ claim 1, further comprising a first transitional layer situated between the input waveguide and the intermediate waveguide.

10. (currently amended) A coupler according to ~~any preceding~~ claim 1, further comprising a ~~second~~ transitional layer situated between the output waveguide and the intermediate waveguide.

11. (currently amended) A coupler according to ~~any preceding~~ claim 1, ~~in which~~ wherein the first and second gratings have differing periods, ~~and/or~~ or lengths, ~~and/or~~ or depths, ~~and/or~~ or profiles, ~~and/or~~ or duty cycles, or any combination thereof.

12. (currently amended) A coupler according to ~~any preceding~~ claim 1, comprising a layered structure, in which each waveguide, grating or transitional layer comprises a respective layer or part thereof, of the structure.

13. (currently amended) A coupler according to claim 12, ~~in which~~ the layered structure comprises one or more layers of semiconductor, ~~and/or~~ or dielectric material, or both.

14. (currently amended) A coupler according to claim 13, ~~in which~~ wherein the semiconductor material comprises one or more of: silicon or related compounds; gallium arsenide or related compounds; indium phosphide or related compounds; or lithium niobate or related compounds.

15. (currently amended) A coupler according to ~~any one of claims 12 to 14, in which~~ claim 13, wherein the dielectric material comprises a glass~~, preferably a phosphosilicate glass~~.

16. (currently amended) A coupler according to ~~any preceding~~ claim 1, ~~in which~~wherein the waveguides comprise rib waveguides, ~~and/or~~ or planar waveguides, ~~and/or~~ or strip waveguides, ~~and/or~~ or embedded waveguides, or any combination thereof.

17. (currently amended) An integrated optical device comprising an optical coupler according to ~~any preceding~~ claim 1, ~~in which~~ wherein the input waveguide ~~and/or~~ or the output waveguide of the coupler comprises a semiconductor waveguide of the device.

18. (currently amended) A device according to claim 17, ~~in which~~ wherein the semiconductor waveguide of the device comprises a semiconductor laser of the device.

19. (currently amended) A device according to claim 17, ~~in which~~ wherein the semiconductor waveguide of the device comprises a photodiode of the device.

20. (currently amended) The use of an optical coupler or device according to ~~any preceding~~ claim 1, to couple light between an external first waveguide and the output waveguide of the coupler, via the input waveguide of the coupler.

21. (currently amended) The use according to claim 20, ~~in which~~ wherein the external first waveguide comprises an optical fibre.

22. (new) A coupler according to claim 10, further comprising a second transitional layer disposed between the output waveguide and the intermediate waveguide.